

**Loosely laid natural stone panel floor**

The invention relates to a natural stone panel floor,  
whereby the floor panels thereof are laid at a distance  
5 from each other on an essentially flat base.

It is well-known to loosely lay natural stone floor  
coverings on an essentially flat base for meetings, shift  
fairs etc. for later further use. As a compensation for  
10 variations, narrow gaps are formed between the panels,  
employing for example cross-shaped plastic spacers, which  
are commonly used for laying fixed panels. In this case  
however, the result is not an immovable composite structure  
of the panels, and any height differences of the ground  
15 cause the panels to tilt and/or form steps at the joints,  
which makes the floor more difficult to walk on and  
possibly brings about a risk of falling. Also the free  
edges of the panels can be damaged, which in particular  
impairs their re-use.

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It is the aim of the invention to create a loosely laid  
natural stone panel floor which exhibits a mostly flat,  
joint-free surface and which is easy to lay and to take up  
again.

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The solution is attained in such a way that that the floor panels comprise, respectively, a groove which is arranged on the lateral surfaces thereof and respectively a plastic spacer which is arranged between adjacent floor panels, 5 said spacer supporting a clamping crosspiece on both sides thereof, which is maintained in a clamped manner in the groove.

Favourable embodiments are indicated in the subclaims.

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The clamping crosspieces preferably exhibit a horizontal boundary surface and clamping lamellas in opposite orientation, which are held in the groove in a clamping fit. The boundary surface gives an exact reference to the 15 adjacent groove surface. Favourably, the spacer extends upward from the clamping crosspieces in the joint up to the level of the stone panel, distancing the plates, so that a smooth, well-closed surface is formed above the joint.

20 Furthermore, it proves to be favourable, to use a relatively firm plastic such as PP, PE or ABS for the clamping crosspieces and the intermediate region and to use a softer component for the upper joint region which is moulded on by injection.

Preferably the upper edges of the soft region extend laterally above the joints, far enough to fill the respective chamfer of the stone, which is bevelled of approximately 1 mm.

- 5 This way no dirty or washing water etc can penetrate. Also small variations of the joint remain invisible, which by can occur due to the cutting of the stone and/or misalignments during use.

- 10 Fig.1 shows favourable embodiments.

Fig.1 shows a cross section of a joint region with a stone panel attached.

- 15 The side surfaces of the stone panels 1 are provided with a groove 11, which is preferably situated in the middle at half the height of the plate.

- A joint spacer 2 extends between the stone panels 1,  
20 extending respective clamping crosspieces 20, 21 into the corresponding grooves 11 on both sides. Preferably the clamping crosspiece 20, 21 exhibits an essentially smooth reference surface 22 at the top, defining the height at which it is situated in relation to the upper surface of  
25 the groove. The soft plastic knobs (24B) attached by means

of injection-moulding, increase the clamping effect and ensure a sealing against moisture.

Retaining lamellas 23 of conical and/or knob shape extend  
5 downward from the continuous clamping crosspiece region in  
a flexible manner providing a clamping fit in the groove  
11. A joint region 24 of the spacer 2 extends upward from  
the reference surface 22 in the joint, where the upper  
joint region 24A is made from a substantially more flexible  
10 material.

The flexible joint region 24A projects from the vertical  
joint with diverging edge regions 25 into the respective  
chamfer 12 bevelled on the stones 10 and fills it in a  
sealing manner.

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The grooves are for example 3.0 mm wide and 7 mm deep.

Accordingly, before the installation, the lateral  
crosspieces of the connecting element are about 3.2 mm high  
20 and 6.8 mm wide. The joint region 24 of the connecting  
element is for example 7 mm high, which corresponds to the  
interval between the reference level 22 and the surface of  
the stone. The chamfer 12 on the stone 10 is about 1 mm  
wide; the projecting region 25 of the joint connector and

spacer 2 is shaped accordingly. The stone panels and the joint connectors/spacers are also a separate commodity.

**Reference symbols**

1	stone panel
11	grooves
12	chamfers
2	plastic spacers
20, 21	clamping crosspieces
22	reference surface
23	lamellas
24	joint region
24A	upper, soft joint region
24B	sealing and clamping knobs (soft)
25	covering edge regions